

REMARKS

Claims 1-10 are pending in the application. By this Amendment, claims 1-7 and 9 are amended for the purposes of clarity and precision, and the specification is also amended. Applicant respectfully requests withdrawal of the rejections and objection, and allowance of the claims.

I. Formalities, objection

Applicant thanks the Examiner for acknowledging foreign priority based on Japanese Application No. 2001-043588, filed February 20, 2001, and for providing an initialed copy of Form PTO-1449, indicating consideration of the references submitted in the Information Disclosure Statement filed on February 19, 2002.

Additionally, the Examiner objects to the drawings due to alleged failure to comply with 37 C.F.R. § 1.84(p)(5). More specifically, the Examiner asserts that the following reference characters illustrated in Figure 2 are missing from the specification: Lmin, L1, TL1, Wmin, W1 and TW1. As shown in the foregoing amendments, those reference signs have been included in the specification without adding new matter. Accordingly, Applicant respectfully requests withdrawal of the objection to the drawings.

II. Allowable subject matter

The Examiner has indicated that the claims are all allowable over the prior art of record, and would be allowed if amended to overcome the 35 U.S.C. § 112, 2nd paragraph rejections. Applicant thanks the Examiner for the indication of allowable subject matter. As shown in the foregoing amendments, Applicant has amended the claims to overcome those rejections, and accordingly, respectfully requests allowance of the claims.

III. Claims 1-10 are in proper condition

Claims 1-10 stand rejected due to alleged indefiniteness under 35 U.S.C. § 112, 2nd paragraph. As shown in the foregoing amendments, Applicant has amended the claims to overcome the indefiniteness rejections. Further, dependent claims 8 and 10 are believed to be allowable due to their dependence from amended independent claims 7 and 9, respectively. Accordingly, Applicant respectfully requests withdrawal of the rejections, and allowance of the claims.

IV. Conclusion

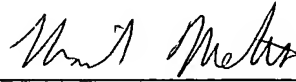
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880.

Amendment Under 37 C.F.R. § 1.111
U.S. Appln. No. 10/076,447

Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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PATENT TRADEMARK OFFICE

Date: April 18, 2003

APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The specification is changed as follows:

Please amend page 14, 1st full paragraph as follows:

As shown in Fig. 4, the inside of the heat processing apparatus 1 is partitioned with the preheating portion I and the developing portion II formed like chambers. An air sucking portion communicating with the outside which is not shown is opened in a chamber portion 26. Moreover, an exhaust path 27 communicating with the outside is coupled to the chamber portion 26. The exhaust path 27 has a deodorizing filter 28 and an exhaust fan 29 provided sequentially from the inside of a chamber portion [65]26. A gas generated from the preheating portion I and the developing portion II is sucked from the chamber portion [65]26 into the exhaust path 27, and passes through the deodorizing filter 28 and is cleaned, and is then discharged to the outside of the apparatus through the exhaust fan 29.

Please amend page 16, 1st full paragraph as follows:

Fig. 2 shows a sequence for determining the minimum standby time of a next thermal developing sheet. If the sheet B to be next developed thermally is an mth sheet, the last (previous to the sheet B) sheet A is an (m-1)th sheet. The (m-1)th sheet A is thermally developed in the state of temperature stability of a processing machine. In that case, information about the size of the sheet A (e.g., length L_{m-1} and width W_{m-1}) is acquired from an exposing machine, the processing machine or a sensor (step S1). The minimum standby time (a minimum

time required for temperature recovery) TLA is acquired from a versus-length minimum standby time table by the length of the sheet A, for the sheet B to be next processed.

Please amend page 16, 2nd full paragraph as follows:

The versus-length minimum standby time table is created in a following way. At first, all variations of the sheet sizes in the direction of the length among the sheets that are planned to be used with this apparatus are classified into n steps of groups according to the size in the direction of the length. For example, as illustrated in step S2 of Figure 2, in the first group a lower length L_{min} of a sheet is less than or equal to a length L_{m-1} of sheet m-1, and the length L_{m-1} is less than upper length L_1 of a sheet. A similar relationship exists for the remaining groups 2 through n. Then [stores]stored data is obtained by measuring a recovery time (a minimum standby time based on the length) required from passage through a heating device (a heating roller) to recovery (of the heating device) to a developing temperature for each group (e.g., $TL_1 \dots TL_i \dots TL_n$ as the group developing temperatures illustrated in Figure 2). For example, for the first group, developing temperature TL_1 is chosen based on the above-described length.

Please amend the paragraph bridging pages 16 and 17 as follows:

Accordingly, if the sheet (m-1) which is being thermally developed has a length L_{m-1} that corresponds to a group having lengths of $L_{(i-1)}$ to L_i (such that L_{i-1} is less than or equal to L_{m-1} , and L_{m-1} is less than or equal to L_i) in the versus-length minimum standby time table of a step S2, the minimum standby time is set to TL_1 and the thermal developing temperature is recovered after the minimum standby time TL_1 passes. Therefore, the sheet m to be next developed may be fed to the heating device.

Please amend page 17, 1st full paragraph as follows:

Similarly, a versus-width minimum standby time table is created for the size in the direction of a width. More specifically, the versus-width minimum standby time table is created in a following way. At first, all variations of the sheet sizes in the direction of the width among the sheets that are planned to be used with this apparatus are classified into n steps of groups according to the size in the direction of the width. For example, as illustrated in step S5 of Figure 2, in the first group a lower width W_{min} of a sheet is less than or equal to a width W_{m-1} of sheet m-1, and the width W_{m-1} is less than upper width W_1 of a sheet. A similar relationship exists for the remaining groups 2 through n. Then [stores]stored data is obtained by measuring a recovery time (a minimum standby time based on the width) required from passage through a heating device (a heating roller) to recovery (of the heating device) to a developing temperature for each group (e.g., $TW_1...TW_i...TW_n$ as the group developing temperatures illustrated in Figure 2). For example, for the first group, developing temperature TW_1 is chosen based on the above-described length.

IN THE CLAIMS:

The claims are amended as follows:

1. (Once amended) A thermal developing method for continuously and thermally developing thermal developing sheets which have a latent image formed thereon by exposure and various sizes,

wherein a minimum temperature recovery time required for thermally developing a sheet is determined from physical information about a thermally developed sheet, said physical

information including at least one of size and manufacturing material characteristics, and [the]a
next thermal developing sheet is started to be developed after the minimum temperature recovery
time passes, and heating of said thermal development sheet is performed prior to thermally
developing said thermal development sheet.

2. (Once amended) A thermal developing method according to claim 1, wherein the
physical information [is constituted by]comprises a combination of at least one of a dimension in
a direction of a length, a dimension in a direction of a width, a thickness and a material of which
the thermal developing sheet is made.

3. (Once amended) A thermal developing method for continuously and thermally
developing thermal developing sheets which have a latent image formed thereon by exposure
and various sizes,

wherein minimum temperature recovery times required for thermally developing a next
thermal developing sheet are determined from physical information about a thermally developed
sheet and physical information about the next thermal developing sheet, respectively, said
physical information including at least one of size and manufacturing material characteristics,
and the longer time of the minimum temperature recovery times is selected to be a minimum
standby time and the next thermal developing sheet is started to be developed after the selected
minimum standby time passes, and heating of said thermal development sheet is performed prior
to thermally developing said thermal development sheet.

4. (Once amended) A thermal developing method according to claim 3, wherein the
physical information [is constituted by]comprises a combination of at least one of a dimension in

a direction of a length, a dimension in a direction of a width, a thickness and a material of which
the thermal developing sheet is made

5. (Once amended) A thermal developing method for continuously and thermally developing thermal developing sheets which have a latent image formed thereon by exposure and various sizes, comprising the steps of:

determining a minimum temperature recovery time required for thermally developing a next thermal developing sheet from a size of a thermally developed sheet;

measuring a time required until a rear end of the thermal developing sheet is completely developed and a tip of the next thermal developing sheet is then started to be developed;

comparing the required time with the minimum temperature recovery time; and

starting to develop the next thermal developing sheet if the required time is equal to or greater than the minimum temperature recovery time as a result of the comparison, wherein heating of said thermal development sheet is performed prior to thermally developing said thermal development sheet.

6. (Once amended) A thermal developing method for continuously and thermally developing thermal developing sheets which have a latent image formed thereon by exposure and various sizes, comprising the steps of:

acquiring information about a size of a next thermal developing sheet before a developing process;

measuring a time required until a rear end of the thermal developing sheet is completely developed and a tip of the next thermal developing sheet is then started to be developed;

determining a minimum temperature recovery time required for thermally developing the next thermal developing sheet from a size of a thermally developed sheet and a size of the next thermal developing sheet;

comparing the required time with the minimum temperature recovery time; and

starting to develop the next thermal developing sheet if the required time is equal to or greater than the minimum temperature recovery time as a result of the comparison, wherein heating of said thermal development sheet is performed prior to thermally developing said thermal development sheet.

7. (Once amended) A thermal developing apparatus for continuously and thermally developing thermal developing sheets which have a latent image formed thereon by exposure and various sizes, comprising:

sheet tip required time measuring means for measuring a time required until a rear end of the thermal developing sheet is completely developed and a tip of a next thermal developing sheet is then started to be developed;

minimum temperature recovery time determining means for determining a minimum temperature recovery time required for thermally developing the next thermal developing sheet from a size of a thermally developed sheet; and

comparing means for comparing the required time measured by the sheet tip required time measuring means with the minimum temperature recovery time determined by the minimum temperature recovery time determining means, wherein a means for heating heats said thermal developing sheet prior to thermally developing said thermal developing sheet.

9. (Once amended) A thermal developing apparatus for continuously and thermally developing thermal developing sheets which have a latent image formed thereon by exposure and various sizes, comprising:

sheet size information acquiring means for acquiring information about a size of a next thermal developing sheet before a developing process;

sheet tip required time measuring means for measuring a time required until a rear end of the thermal developing sheet is completely developed and a tip of the next thermal developing sheet is then started to be developed;

minimum temperature recovery time determining means for determining a minimum temperature recovery time required for thermally developing the next thermal developing sheet from a size of a thermally developed sheet and a size of the next thermal developing sheet; and

comparing means for comparing the required time measured by the sheet tip required time measuring means with the minimum temperature recovery time determined by the minimum temperature recovery time determining means, wherein a means for heating heats said thermal developing sheet prior to thermally developing said thermal developing sheet.